Status of Claims:

1. (Original) An improved method for enhancing immune responses by upregulating co-stimulatory molecules, the upregulating of the co-stimulatory molecules comprising the steps of administering a glucan-containing composition to an animal or a human, in sufficient dosage to cause an enhanced expression of co-stimulatory molecules on antigen presenting cells, the co-stimulatory molecules providing a second signal to T lymphocytes, causing the T lymphocytes to differentiate into armed effector cells.

2. (Original) The improved method of Claim 1 wherein the glucan-containing composition is at minimum a portion of a glucan selected from the group consisting of β 1,3-glucans and β 1,6-glucans.

3. (Original) The improved method of Claim 1 wherein the molecule expressed is a molecule from a family of B7 molecules.

4. (Original) The improved method of Claim 5 wherein the family of B7 molecules comprises a molecule selected from the group including B7.1, B7.2, and B7.3.

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Original) A method of using microparticulate beta -(1,3)-glucan as a vaccine adjuvant comprising the steps of:

preparing or obtaining a microparticulate beta -(1,3)-glucan composition which does not

substantially reaggregate upon drying and rehydration which contains partially deacetylated N-acetlyglucosamine with a free amino group;

 suspending the microparticulate beta -(1,3)-glucan composition in liquid;

 adding at least one vaccine or antigenic substance;

 conjugating the vaccine onto the free amino group; and

 administering the vaccine to an animal or human.

12. (Original) The method of Claim 11, wherein the glucan contains less than 5% by weight protein and lipid, more than 85% by weight glucose, and about 1-10% by weight chitin or partially deacetylated N-acetylglucosamine.

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Canceled)

22. (Canceled)

23. (Canceled)